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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

JUN 6 2000

In the Matter of	)
	)
ITFS 2020	)
Emergency Petition for Postponement	)
Of the July 3 - July 10, 2000 Filing	)
Window for Two-Way Multipoint	)
Distribution Service and Instructional	)
Television Fixed Service Applications	)

To the Chief, Mass Media Bureau:

EMERGENCY PETITION

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SUMMARY

ITFS 2020 requests that the FCC's Mass Media Bureau grant a postponement of the first filing window for Multipoint Distribution Service ("MDS") and Instructional Television Fixed Service ("ITFS") applications for two-way operations. This short-term delay in the filing window is necessary because the commercially available filing software that ITFS (and MDS) licensees need to submit their two-way applications during the first filing window is not yet perfected. The delay is necessary also to ensure that two-way applicants are provided timely access to up-to-date FCC licensing information -- ideally in an electronic database format -- for use in preparing their two-way applications, so that any applications ultimately filed contain accurate technical data concerning interference to incumbent licensees' operations. Finally, the requested delay will enable two-way applicants to obtain clarification from the FCC staff of a number of procedural and technical issues essential to the two-way application process. Without the requested delay, ITFS 2020 predicts that the vast majority of ITFS licensees will be unable to complete applications for two-way operations in time for the filing window, and the introduction of two-way services on a widespread basis will be substantially delayed. As a result, many ITFS licensees will not be able to gain the full benefits of the advanced two-way services and technologies that the Commission has sought to make available to them to further their educational mission. Indeed, many licensees, particularly in the large markets, may be permanently excluded from service to substantial sections of their service areas if they are unable to file in the opening window.

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To the Chief, Mass Media Bureau:

EMERGENCY PETITION

ITFS 2020,[1] by its attorneys, respectfully submits this Emergency Petition requesting that the Federal Communications Commission's ("FCC" or "Commission") Mass Media Bureau ("Bureau") postpone the July 3 through July 10, 2000 filing window for Multipoint Distribution Service ("MDS") and Instructional Television Fixed Service ("ITFS") applications for two-way operations.[2] As set forth more fully below, the nine-month postponement we request is necessary to allow ITFS licensees to file applications that will permit two-way operations. Absent the requested postponement, ITFS licensees either will submit applications that turn out to be incomplete or inaccurate, and therefore unacceptable for filing, or simply will be unable to

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[1] ITFS 2020 is a new company that was created to aggregate ITFS spectrum in order to maximize the educational benefits of two-way operations and to secure new opportunities for partnering with commercial carriers. ITFS 2020 also will help ITFS licensees in the preparation of applications for authorization for two-way operations.

[2] *See Public Notice*, DA 00-666, "Commission Announces Initial Filing Window for Two-Way Multipoint Distribution Service and Instructional Television Fixed Service" (rel. March 23, 2000) ("*Filing Window Public Notice*").

complete their applications and thus be forced to wait until subsequent filing windows to apply for two-way authorization. To the extent that some licensees are able to meet the initial window, all other nearby co-channel and adjacent channel licensees stand to be severely handicapped. As a result, the introduction of two-way services on a widespread basis will be substantially delayed, and many ITFS licensees will not be able to gain the full benefits of the advanced services and technologies necessary to further their educational missions. These licensees – and the public – will suffer irreparable harm if this opportunity is lost.

I. BACKGROUND

In a Report and Order issued on September 25, 1998, the Commission revised its rules to enable MDS and ITFS licensees to engage in fixed, two-way transmissions.[3] This action was taken in response to a petition for rulemaking filed by a significant number of MDS and ITFS licensees seeking to enhance the competitiveness of the wireless cable industry and to extend the benefits of advanced, two-way communications capabilities to the educational community. As the Commission recognized in adopting these revised rules, this increased flexibility will dramatically expand the universe of services and applications that ITFS licensees may offer to include advanced video-conferencing, distance learning, and expanded continuing education opportunities.[4] In addition, this increased flexibility will significantly increase the value of ITFS spectrum to ITFS licensees for their own use and as an asset to be leased to commercial carriers.[5] One particularly useful application could be the introduction of additional wireless local

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[3] *See Amendment of Parts 21 and 74 To Enable Multipoint Distribution Service and Instructional Television Fixed Service Licensees to Engage in Fixed Two-Way Transmissions*, Report and Order, 13 FCC Rcd 19112 (1998) ("*Two-Way Order*"); Report and Order on Reconsideration, 14 FCC Rcd 12764 (1999) ("*Two-Way Reconsideration Order*").

[4] *Two-Way Order*, 13 FCC Rcd at 19115-19115 ¶¶ 6-9.

[5] *Id.* at 19117 ¶ 10.

competition over the ITFS and MDS spectrum. Regardless of whether they intend to aggregate spectrum with other ITFS licensees, partner with commercial providers, or use their spectrum solely to meet their internal needs, all ITFS licensees can benefit from the ability to provide two-way services.

Applicants submitting two-way applications will be required to certify that they have met all requirements regarding interference protection to existing and prior proposed facilities, and that they have served all potentially affected parties with copies of their applications and with detailed engineering analyses.[6] Applications that are found by the Commission staff to be incomplete or that lack the required certifications will be dismissed with prejudice and the applicants will lose their priority over subsequently filed applications.[7] Where an application is found by the staff to be grantable, it is very important that all engineering calculations in fact be accurate: If at any time after the grant of an application, unauthorized interference results to a protected facility, the grantee-licensee will be required to cease operations immediately. At that point, the burden will be on that two-way licensee to prove that it is not the cause of such interference.[8]

On March 23, 2000, the Bureau announced that the first filing window for MDS and ITFS two-way applications would open on July 3 and close on July 10, 2000. Both the Commission and the MDS/ITFS industry have an interest in ensuring that the two-way licensing process begins as soon as possible. Indeed, the ITFS community has urged the Commission since the start of the two-way proceeding to expedite the availability of two-way operations for educational purposes; many licensees accordingly initially supported and even advocated the

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[6] *Id.* at 19148 ¶ 66.

[7] *Id.*

[8] *Id.* at 19148-19149 ¶ 69.

July filing deadline. However, as explained in greater detail below and in the attached declarations,[9] it has become apparent over the past month or so that licensees face certain short-term problems relating to the two-way application process that make it extremely difficult, if not impossible, for at least the great majority of ITFS licensees to prepare acceptable, grantable applications in time for the first filing window. ITFS 2020 believes that many MDS licensees also are experiencing these problems and would benefit from the requested delay. ITFS 2020 therefore respectfully requests that the Bureau temporarily postpone the first filing window to permit these problems to be solved.

II. IN ORDER TO MAXIMIZE THEIR ABILITY TO PROVIDE TWO-WAY OPERATIONS, LICENSEES MUST FILE IN THE FIRST FILING WINDOW.

Although the FCC has indicated that it will open rolling filing windows for two-way authorizations on a regular basis following the first filing window, as discussed below, these future filing windows are not a substitute for the initial filing opportunity. A significant factor in determining whether a two-way application is grantable depends upon the applicant's ability to demonstrate that proposed two-way operations will not cause interference to existing or prior proposed operations. Thus, the ability of an applicant filing for two-way authorization for a specific market in subsequent filing windows to demonstrate that its operations will not cause interference to other licensees decreases significantly each time that a two-way application is granted for that market, with corresponding reduction in the areas it can serve. This is likely to be a particular problem in larger markets, where the greatest number of stations is located and the greatest number of initial two-way applications is anticipated. Further, those whose

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[9] *See* Declaration of John E. Hidle ("*Hidle Decl.*") (attached); Declaration of Philip D. Duncan ("*Duncan Decl.*") (attached).

applications are granted first in time will have little incentive to negotiate any middle ground. By contrast, all applications filed during the initial filing window will be considered filed on the same day; as the FCC recognized, this gives applicants with conflicting proposals incentives to negotiate mutually agreeable solutions.[10] Once having missed the opportunity of filing during the first filing window, the longer ITFS two-way applicants must wait to file until after that first window has closed, the less likely their chances of ever being able to provide two-way operations throughout their entire licensed service area.

Participation in the initial filing window is especially vital for licensees that must rely on "limited exception" status.[11] This applies to all stations that now receive harmful interference within their 35-mile-radius protected service areas ("PSAs"), as is the case with many or most stations in those markets that have numerous licensed stations, particularly the largest markets. The "limited exception" permits Station A to propose two-way service that would cause interference to areas within Station B's PSA to the extent that those areas already suffer interference.[12]

Reliance on this exception will be of critical importance to many stations. The value of this exception will decline dramatically to the extent that stations are unable to file in the first window, for the following reason: The two-way applications of Station A and B, which now interfere with each other, can be expected to involve mutual interference. If both are filed in the

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[10] *Two-Way Order* at 19148 ¶ 65.

[11] *See Amendment of Parts 21, 43, 74, 78, and 94 of the Commission's Rules Governing Use of the Frequencies in the 2.1 and 2.5 GHz Bands Affecting: Private Operational-Fixed Microwave Service, Multipoint Distribution Service, Multichannel Multipoint Distribution Service, Instructional Television Fixed Service, & Cable Television Relay Service,* Second Order on Reconsideration, 10 FCC Rcd 7074, 7083 ¶¶ 24-25 (1995); *In the Matter of Request for Declaratory Ruling on the Use of Digital Modulation by Multipoint Distribution Service and Instructional Television Fixed Service Stations,* Declaratory Ruling and Order, 11 FCC Rcd 18839, 18853 ¶¶ 23-24 (1996) ("*Digital Modulation Order*").

[12] *See Digital Modulation Order* at 18853 ¶¶ 23-24.

initial filing window, those stations will have parity of status and they will be in a position to work out their differences on a mutually beneficial basis. If they do not file in the first filing window, the race will be to the swift; thus, if Station A files even a day later than Station B, Station A will be required to provide full protection to Station B, and Station A's service area accordingly will be severely limited. Thus, if a licensee relying on the limited exception cannot successfully participate in the initial two-way filing window -- and the Commission grants the two-way application of co-channel or adjacent channel stations -- then that licensee effectively may be confined to its present analog one-way service contours for any subsequent two-way applications. That means that the licensee and the public it serves will be denied the full benefits of innovative new digital technologies and the most efficient network designs. The FCC's procedures for this initial two-way filing window must permit all limited exception licensees who wish to do so to fully participate.

In light of these basic engineering realities, public policy reasons weigh in favor of scheduling the initial filing window so as to ensure the greatest possible participation in the first filing window. The ITFS community has worked hard to secure the option to provide two-way services because of the advantages that such flexibility will afford. These efforts will have been wasted if software and other avoidable technical limitations prevent the vast majority of ITFS licensees from gaining access to the advanced technologies necessary to further their educational mission.

III. COMMERCIALLY AVAILABLE SOFTWARE IS NOT YET RELIABLE.

As noted above, an application for two-way authorization requires that an applicant certify that it has conducted extensive engineering analyses demonstrating that its proposed two-way use will not cause interference to any existing or prior proposed operations in the applicant's market area.[13] In the vast majority of markets, these required engineering showings are very complex and time consuming and cannot be conducted without the use of highly complex technical filing software. To date, however, there is no perfected software commercially available to ITFS and MDS licensees that is completely capable of handling the interference analyses required in the two-way application process.

As of the date of this petition, there are two providers of filing software that may be used by ITFS licensees.[14] The first software package, offered by CelPlan, was officially released on April 15, 2000;[15] the second, offered by EDX Engineering, was officially released only on May 15, 2000.[16] Significant flaws remain in each that will make filing in time for the current initial filing window virtually impossible.[17] First, neither software program is yet capable of incorporating data from any other application, whether filed using the same or the other software package. As a result, the evaluation of concurrently filed applications that is an essential part of the two-way application process will be impossible.[18] Second, neither the CelPlan nor EDX software is yet capable of accepting data from a diskette or CD-ROM, which prevents licensees

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[13] *Two-Way Order,* 13 FCC Rcd 19112, 19147-47 ¶ 62. The Commission also has suggested that it will rely on an applicant's certification as a "material representation." *Id.* at *19148-19149 ¶ 69. n.158.* As a result, applicants who file applications despite the lack of reliable information may be subject to complaints that they have knowingly filed applications that contain misrepresentations.

[14] *See Hidle Decl.* ¶ 6; *Duncan Decl.* ¶ 3.

[15] *See Hidle Decl.* ¶ 6.

[16] *See id.*

[17] *See generally Hidle Decl.* ¶¶ 6-9; *Duncan Decl.* ¶ 3.

[18] *See Hidle Decl.* ¶ 7.

from evaluating potential interference from a proposed two-way system to an incumbent licensee's system, or between proposed two-way systems.[19] Finally, neither the CelPlan nor EDX software is yet capable of addressing the two-way interference rules' "limited exception" status discussed above which is used to define the protected service area when station partitioned service areas overlap.[20] Significant training also is necessary in order to use the software, which dramatically increases the burden associated with filing a two-way application. For example, CelPlan recommends up to 30 days of intensive training before it may be used proficiently, and the EDX program also requires significant training to operate.[21] In total, ITFS 2020 estimates that, even when the software packages are perfected, the preparation of an accurate, complete two-way application could take between up to 1000 hours of engineering effort to complete, depending on the number of incumbents encountered.[22] Further, each time that an updated version of the software is made available, licensees who have begun to prepare applications must rerun the information in the revised program.[23]

Both software providers continue to provide updated filing software[24] and have assured ITFS 2020 that they are working to fix these problems as quickly as possible. As a result, ITFS 2020 is confident that the requested delay will result in perfected software that will allow the application process to move forward. However, as detailed above, absent the postponement requested, the current state of this software makes timely filing impossible, except for MDS licensees that intend to propose two-way systems of very limited capacity and sophistication.

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19 *See id.*
20 *See id.*
21 *See id.* ¶ 6.
22 *See id.* ¶ 8.
23 *See id.*
24 *See id.*

IV. POSTPONEMENT OF THE FIRST FILING WINDOW WOULD PROVIDE ADDITIONAL TIME FOR THE FCC STAFF TO CONTINUE MAKING NECESSARY IMPROVEMENTS TO THE ITFS/MDS DATABASE

As discussed above, among other technical requirements, the Commission requires that an applicant for a new or modified two-way system protect all incumbent MDS and ITFS licensees from harmful interference from the proposed two-way operations.[25] As a result, access to current information regarding the technical operations of incumbent and prior proposed operations is fundamental to the two-way application process. To date, however, ITFS licensees' preliminary efforts to prepare applications using available FCC data demonstrate that obtaining necessary technical information is too difficult within the short time left before the first filing window opens. The application process also has been complicated by the fact that although the FCC staff has indicated that it will release an up-to-date and electronically searchable database that contains all necessary licensing information in advance of the first filing window, to date no such database has been made available.[26] While MMDS/ITFS data files have been available on the Mass Media Bureau website, no file descriptions or database table definitions have yet been provided. As a result, these data files have been unusable. Very recently, the FCC has provided

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[25] Specifically, the interference analyses required by Form 331 includes all co-channel and adjacent channel stations within 100 miles of any system main station, booster station or response hub.

[26] *See Hidle Decl.* ¶ 10; *Duncan Decl.* ¶ 5. Furthermore, consulting engineers who have "jury rigged" access to currently available electronic licensing information found numerous instances where electronically available information is not current or complete as compared to information in the reference room files. ITFS 2020's representatives who recently compared electronically available information for seven BTAs in the top ten markets with information for the same BTAs in the FCC's reference room found a number of serious discrepancies. For example, some electronic licensing records lacked certain basic technical information (*e.g.*, description of antennas and authorized power levels; the number of links between modules) necessary to complete an accurate application for two-way operations where an interference analysis of the incumbent is required. Such examples were brought to the attention of FCC staff, and it appears that these files have been corrected. ITFS 2020 fears, however, that serious errors or omissions still may exist in many other parts of the database.

electronic access to individual MMDS/ITFS license files. As yet, no engineering or technical data can be obtained from such files.[27]

Without an accurate, up-to-date, electronically searchable database, ITFS and MDS licensees must instead obtain all information on incumbents' stations from the files of the FCC's Public Reference Room in Washington, DC. However, the need to review paper licensing records for each incumbent licensee that might be subject to interference from proposed operations makes completing the engineering analyses necessary to prepare an application for two-way operations considerably time consuming. In addition, significant restrictions on the availability of these files have severely limited ITFS licensees' ability to determine the presence of incumbents within a reasonable time and thus have dramatically increased the burden associated with applying for two-way authorization. For example, a member of the public currently is permitted to review only three files per day, and the files are accessible only four days per week.

ITFS 2020 recognizes that improvement in public access to the Commission's ITFS/MDS licensing information is no easy task, especially in light of the Commission's recent need to devote staff resources to its own Y2K compliance efforts, and ITFS 2020 appreciates the ongoing efforts of Commission staff to ensure that such information is as accurate and up-to-date as possible. By temporarily postponing the initial two-way filing window, the Commission can help to ensure that the current limitations on the availability of accurate technical information do not prevent ITFS licensees from filing accurate, grantable two-way applications. First, a postponement would give the Commission staff the time necessary to make the promised

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[27] *See Hidle Decl.* ¶ 10.

electronic database available sufficiently in advance of the filing deadline to be usable by two-way applicants. Second, once an electronic database is made available, a delay would give applicants whom to date have relied on paper files in the reference room the time needed to cross reference the information in the files. Such cross checking is necessary not only with respect to information concerning other licensees' operations, but also with respect to data describing the applicant's own stations.[28] Third, if no electronic database can be made available well in advance of the revised filing window, a postponement would ensure that ITFS applicants have sufficient time, in light of the limitations on access to information regarding incumbents' operation available in the reference room, to obtain the technical information necessary to complete their applications. Finally, waiting until a fully up-to-date database is available before opening the first filing window will help to eliminate any unfairness that might result to first round applicants because of information that is added to the database only after their applications have been filed. For example, ongoing changes to the database after the filing deadline could easily result in a situation where an application is petitioned and dismissed based on information that becomes available in the database only after the application has been filed. Worse still, such changes could result in unpredictable interference after the license has been granted that forces the licensee to cease all operations on that frequency.

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[28] The postponement also would permit ITFS licensees who do not intend to file for two-way authorization to verify that the files relating to their *own* licenses contained in the reference room or the database are accurate. This will ensure that licensees are able to demonstrate that their current operating parameters would be threatened by other licensees' proposed two-way operations.

V. THE COMMISSION SHOULD MAKE USE OF A TEMPORARY POSTPONEMENT OF THE FILING WINDOW TO CLARIFY OUTSTANDING PROCEDURAL ISSUES RELATING TO THE TWO-WAY APPLICATION PROCESS.

To date, engineers consulting with ITFS licensees have identified a number of questions relating to the two-way application process that require clarification before they can prepare acceptable applications in time for the July 3 though 10 filing window. As ITFS 2020's engineers noted in a May 24, 2000, meeting with Bureau staff, these questions range from procedural issues relating to the mechanics of the application process, to more technical concerns relating to the nature of the engineering analyses that must be conducted for each incumbent operator.[29] ITFS 2020 appreciates that staff have addressed a number of these issues, or have assured it that remaining issues will be clarified in time for the first filing window. However, in light of the current filing deadline and the complex nature of the engineering issues involved, ITFS 2020 respectfully submits that it already may be too late for clarification of these issues to be of any practical use to most potential ITFS two-way applicants. Moreover, the vast majority of ITFS licensees may not have the resources or personnel that affords them with similar access to Commission staff necessary to resolve these ambiguities, and must instead rely on the FCC's public notices and other publicly-released information. They also may lack the resources necessary to hire someone to complete their two-way applications for them. Given the time constraints imposed by the July 3 through 10 filing window, the laudable efforts by staff to

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[29] *See* "Discussions with Federal Communications Commission, Mass Media Bureau, May 24, 2000" (attached); *see also Hidle Decl.* ¶ 11. ITFS 2020 recognizes that parties seeking reconsideration, review, or clarification of Commission action generally must do so within 30 days following the action's effective date. *See, e.g.*, 47 C.F.R. §§ 1.106, 1.115. However, as detailed above, the vast majority of these questions have come to light only as ITFS licensees have begun to prepare their applications. As a result, these concerns were not sufficiently evident, or even predictable, to be raised during the 30 days following announcement of the filing window.

informally assist individual licensees simply cannot constitute sufficient clarification or notice of these issues for the entire ITFS community.

Postponement of the July 3 through 10 filing window thus would provide an opportunity for clarification of all outstanding issues relating to the two-way application process. Among other things, a temporary postponement will allow the Bureau to issue clarifying public notices sufficiently in advance of the filing deadline so that ITFS licensees will be able to successfully file accurate and grantable applications. Postponement also would allow the Bureau to issue written responses to "frequently asked questions" or hold a public forum to address these issues, as is routinely done prior to the FCC's wireless and broadcast auctions.[30] Such efforts would help to ensure that *all* MDS and ITFS licensees, and not simply those with the most extensive engineering resources, would have a realistic chance of being able to participate in the initial filing window for two-way operations.

VI. POSTPONEMENT OF THE FILING WINDOW FOR NINE MONTHS IS IN THE PUBLIC INTEREST.

For the reasons outlined above, ITFS 2020 believes that the Bureau should promptly issue a public notice postponing the first filing window for nine months from the originally scheduled July 3, 2000 start date. ITFS 2020 estimates that a postponement of this length is necessary as follows: ITFS 2020 believes that it will require at least 30 days for the filing

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[30] *See, e.g., Public Notice*, DA 99-1346, "Closed Broadcast Auction -- Notice and Filing Requirements for Auction of AM, FM, TV, LPTV, and FM and TV Translator Construction Permits Scheduled for September 28, 1999; Minimum Opening Bids and Other Procedural Issues," 14 FCC Rcd 10632 (1999) at Appendix H (announcing August 3, 1999 Auction Seminar).

software and the Commission's database to be perfected.[31] It will take approximately two months for applicants' engineers to be trained on commercial software and become confident that this software meets their application needs, and to verify that the information available in the FCC's electronic database is the same as that contained in the files in the public reference room. Assuming the database is sufficiently up-to-date, it then will take approximately six months to prepare and file applications. Based on its experience to date, ITFS 2020 estimates that by working diligently from the time usable software is made available, this limited postponement will provide a realistic chance for most licensees to complete two-way applications in time for the first filing deadline.

Given the circumstances, a nine-month postponement is reasonable. A shorter delay would not take into account the time required to prepare a grantable two-way application (even with usable software) and thus would be useless given the limited resources of many ITFS licensees. In contrast, a longer postponement could unnecessarily delay the long-awaited deployment of two-way services. Moreover, this temporary delay is clearly in the public interest. It will ensure that all ITFS licensees who are interested in providing two-way services are given a true opportunity to file acceptable applications with the Commission. It also will increase the likelihood that applications that are filed will be found acceptable by the Commission and will contain the accurate engineering analysis envisioned by the Commission when it adopted its two-way rules. Indeed, no applicant is likely to be prejudiced by such a postponement, as no one, regardless of resources, can confidently file an application until the problems ITFS 2020 has identified are remedied.

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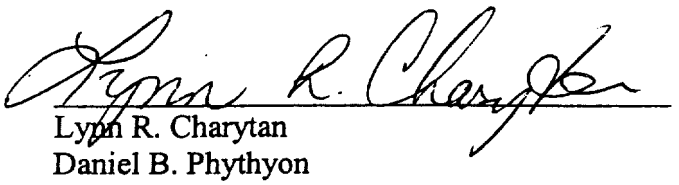
[31] This approximation is based on recent conversations with the software providers and Commission staff; it is possible that it will take longer before either the software or database is ready for use.

VII. CONCLUSION

For all of the foregoing reasons, ITFS 2020 respectfully requests that the Bureau grant this emergency petition for nine-month postponement of the initial filing window for ITFS two-way applications, and announce the postponement as soon as possible so that ITFS licensees may plan accordingly. This temporary postponement will ensure that the ITFS community is able to realize the full benefits that the Commission envisioned in adopting rules to permit two-way operations on ITFS spectrum.

Respectfully Submitted,



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June 6, 2000

DECLARATION OF JOHN E. HIDLE

CARL T. JONES
CORPORATION

DECLARATION OF JOHN E. HIDLE, P.E.

I, John E. Hidle, hereby declare as follows:

1. I am over 18 years of age and competent to make this declaration.
2. I am a Consulting Engineer with the firm of Carl T. Jones Corporation in Springfield, Virginia. Among other services, Carl. T. Jones Corporation conducts engineering analyses and technical studies for FCC filings by licensees in broadcast and other radio services, including Instructional Television Fixed Service (ITFS) and Multipoint Distribution Service (MDS). My education and experience are a matter of record with the Federal Communications Commission. I am a registered Professional Engineer in the Commonwealth of Virginia, Registration No. 7418, and in the State of New York, Registration No. 63418.
3. Carl T. Jones Corporation has been retained by ITFS 2020, L.L.C. to assist in the preparation of applications for two-way ITFS service. Other entities also have sought our services in connection with the preparation of two-way applications for the ITFS and MDS services.
4. ITFS 2020 has also contracted with two large corporations to work with Carl T. Jones Corporation to support the two-way system design and application process: Science Applications International Corporation (SAIC) and Telcordia Technologies, Inc. These two corporations have

significant expertise and experience in the design of state-of-the-art wireless communications systems and architectures and possess the resources to design two-way systems for hundreds of licensees across the country.

5. Extensive efforts have been expended to prepare complete and certifiable applications to be filed in the initial two-way filing window. Several unexpected difficulties have been encountered. These difficulties include software tools that do not incorporate all necessary functions, issues concerning the FCC ITFS/MMDS database, and incomplete clarification of certain FCC Rules and policies. It has become clear that our firm and others as a result will be unable to prepare acceptable and grantable applications in sufficient numbers to enable potential applicants to submit two-way system applications during the initial filing window, unless an extension of time for the initial filing window is provided.

6. Software. The technical complexity of the interference analyses that must be performed in order to prepare and certify an application for a two-way ITFS/MMDS system requires software tools designed specifically to perform extensive calculations that realistically can not be done manually. Two new software packages have been designed to accomplish that task. CelPlan Wireless Global Technologies has developed a multi-module software package that is intended to allow a detailed system design to be made (CelPlanner), the frequency plan to be optimized (CelOptima) and

interference analyses to incumbent stations to be performed (CelFCC). The CelPlan software package was officially released on April 15, 2000, and CelPlan recommends up to 30 days of training in order to fully utilize the tool's capabilities. Carl T. Jones Corporation arranged for eight persons to receive an initial two-day training session prior to the April 15th release date. We recently had six engineers attend an additional three-day formal training session at CelPlan. EDX Engineering, Inc. has also developed an additional module to be used in conjunction with an existing RF design and evaluation tool, SignalPro 3.0. The official release date on this module was May 15, 2000. We arranged for two persons to attend a two-day training seminar a few days after the release date. We are still evaluating the EDX MMDS module as a solution to the challenge of two-way ITFS/MMDS system design and application preparation. To date the accuracy of the two software design application programs has not been verified.

7. In the preparation of applications we have identified deficiencies in the two software packages that will require modifications in order for us to successfully use them in the preparation and evaluation of applications. Neither software developer is yet able to address the Limited Exception to the 35-mile radius protected service area definition, which can be utilized when station's protected service areas overlap, nor has the Limited Exception concept yet been adequately clarified by the Commission. We

expect such further clarification from the Commission. However until such clarification is available, neither software developer will be able to correctly incorporate the limited exception PSA definition into the software tools. The limited exception PSA definition is critically important. Without an interference agreement it is the only way that most ITFS licensees can achieve a viable two-way service. This is especially true in urbanized areas. Further, neither software tool is capable of accepting system design output data from a diskette or CD-ROM for evaluation of potential interference from a proposed two-way system to an incumbent licensee's system, or between proposed two-way systems. These deficiencies will prevent preparation of applications to be timely filed in the currently scheduled window. Additionally, evaluation during the following 60-day review period of concurrently filed applications is not possible.

8. The time required to prepare a two-way system application is extensive. The interference analyses required for all incumbent licensees potentially affected by a two-way system design proposal requires an extremely complex iterative calculation process to search for predicted interference. The design and application process for a single licensee's two-way system can require up to 1000 man-hours for complex multi-hub and multi-booster designs. In addition, while we have been receiving new versions of the CelPlan software suite almost daily, we have unfortunately

discovered that most new versions have been modified to the extent that system designs and interference analyses that have already been completed must be re-evaluated using the revised software. Even if all software deficiencies were to be corrected tomorrow, there is insufficient time remaining prior to the initial filing window to meet the demand for application preparation.

9. In our experience, the interference analysis described in Appendix D of the Report and Order on Reconsideration is by far the most complex process ever adopted by the FCC. Both CelPlan and EDX continue to improve their respective tools; in our opinion, however, more time is necessary for completion of development and final validation of both software packages.

10. FCC Database. In addition to the lack of fully developed and validated software tools necessary to facilitate the preparation of certifiable two-way system applications, the FCC also has yet to make publicly available a complete and readily accessible database that includes information on all incumbent and previously proposed ITFS and MMDS stations. The most reliable information is contained in the individual licensee files located in the FCC public reference room. For several months we have been selecting and copying relevant files from the public reference room in order to construct a usable database for our markets of interest. However, restrictions on the availability of files in the reference room severely limit our ability to accomplish this goal within a reasonable time. While

MMDS/ITFS compressed data files have been available on the Mass Media Bureau web site, no file descriptions or data base table definitions have been provided. Without such information, these data files have been unusable. Very recently, the Commission has provided electronic access to individual MMDS/ITFS license and application files. As yet, no engineering or technical data can be obtained from these individual files. The ITFS2020 technical team has expended considerable effort to decipher the current compressed data files. Our conclusion is that many errors and omissions exist within these unreleased compressed files. We have brought examples of these discrepancies to the attention of FCC staff, and it is apparent that the files are being modified frequently. Nonetheless, a reliable, verified and complete database is not yet available; furthermore, accurate applications cannot be prepared until such a database is available. Providing additional time will not only protect ITFS and MMDS facilities but will allow applicants to prepare two-way applications efficiently.

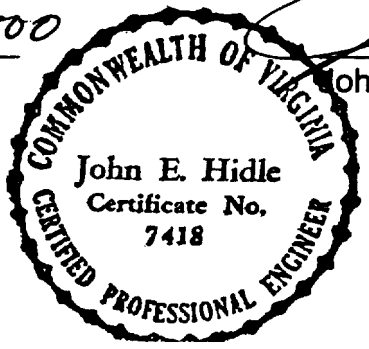
11. Procedural and Technical Issues Requiring Clarification. Our experience in preparing ITFS and MMDS applications also suggests that the FCC's further clarification of a number of issues is necessary before we will be able to prepare fully complete and acceptable two-way systems applications. Requested further clarifications include: (1) procedures and methodology for filing applications electronically; (2) number of

individual Forms 331 that an applicant must file where multiple types of facilities are located at the same site or where multiple applicants make use of a combined Form 331; (3) necessity for conversion of all geographic coordinates from the North American Datum 1927 (NAD27) (the reference used for describing the location of current facilities by the FCC) to the NAD83 reference in advance of performance of required engineering analyses; (4) the limited exception definition of an incumbent's protected service area when PSAs overlap; (5) who must be served with interference analyses, and what form such service should take; and (6) serving the FCC's copy contractor (ITS) with interference analyses for each affected incumbent, despite the fact that each such incumbent will already have been served with this information. These issues should be further clarified well in advance of the filing deadline or else it will likely be impossible to prepare complete and acceptable applications for two-way ITFS and MMDS systems.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Executed on June 6, 2000

John E. Hidle, P.E.



DECLARATION OF PHILIP D. DUNCAN

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I, Philip D. Duncan, hereby declare as follows:

1. I am over 18 years of age and competent to make this declaration.

2. I am Executive Director of the National Conference on Citizenship (NCOC); my office, which is NCOC's Capital Area office, is located in Falls Church, Virginia. NCOC holds seven ITFS licenses, for channels in Albany, NY, Rochester, NY, Hartford, CT, Buffalo, NY, Knoxville, TN, Binghamton, NY, and Burlington, VT; we also have an application pending for a license in Bellows Falls, VT. NCOC desires to file applications with the FCC for two-way authorization for each of its licenses.

3. In exploring how to file two-way applications on behalf of NCOC, I have conferred with consulting engineers who have been working on preparing two-way applications using the software package created by CelPlan Wireless Global Technologies. The consulting engineers have informed me that, in order to have complete confidence in the accuracy and reliability of the results produced by the CelPlan software, they must compare the CelPlan results with results produced by another software package designed for the same purpose. However, I have learned from the engineers that presently there is no adequate alternative software package available; the one other commercially available software package for preparation of two-way applications is still a work in progress, and is simply too undeveloped to provide an adequate basis for comparing the output of CelPlan's software, which the engineers require in order to have confidence in CelPlan's results. The unavailability of an adequate second software package

therefore presents a serious obstacle to NCOC's ability to prepare a complete, reliable and accurate application in time for the FCC's July 3-10, 2000 filing deadline.

4. I also understand from the engineering consultants that, in light of the analyses required to complete two-way applications, it is not practicable for them to manually prepare such applications.

5. I am aware of another obstacle presently impeding the timely preparation of a complete and accurate two-way application: the unavailability of complete and reliable information about other licensees in electronic form. While I am appreciative that the FCC recently placed licensee information on its website, in my experience the database as currently available is incomplete. For example, I discovered after performing a search that the database does not include all of the licensees in every market. This type of information is critical to the filing of complete and accurate two-way applications. Collection of this information manually, by way of the FCC Reference Room, is very time-consuming and burdensome.

6. In light of these facts, I do not feel at this time that NCOC will be able to prepare complete, reliable and accurate two-way applications by July 3-10, 2000. If the FCC's filing window were postponed, I believe that it would be possible for a second software package to be fully developed and implemented as an adequate comparison to ensure the reliability and accuracy of results produced by the CelPlan software package. This information could then be used by consultants in preparing reliable and accurate two-way applications within the revised filing window deadline. In addition, there also is the possibility that, in the extra time provided by a postponement of the filing window, the FCC might make available a complete and accurate electronic database that is fully searchable, so that applicants could rely on information taken from that database in preparing two-way applications.

I declare under penalty of perjury that the foregoing is true and correct.

Philip D. Duncan

Executed on June 6, 2000

ITFS/MMDS
Items Requiring Clarification

ITFS/MMDS

ITEMS REQUIRING CLARIFICATION

ELECTRONIC FILING:

Specific details are required setting forth the method for electronically filing applications. Subsequent Commission Public Notices have been promised to provide this material. The question is: WHEN WILL THESE PUBLIC NOTICES BE ISSUED?

NUMBER OF FORMS 331 REQUIRED:

Instructions for Form 331 state that "A separate application must be submitted for each response station hub, signal booster station or I Channel station at a separate site." Does this mean that an applicant is permitted to apply for multiple facilities at the same site using a single Form 331? Is the operative factor "one 331 form per site"? Conversely, if an applicant wishes to file for six sites, must it file six applications, or can it add pages to a single application?

NUMBER OF APPLICANTS PER FORM:

The instructions state that "A group of applicants may file on a combined FCC Form 331 for any new or modified MDS or ITFS booster station, response station hub, or 125 kHz (I channels) point-to-multipoint, so long as the geographic coordinates are the same." Does this mean that a group of licensees each holding a channel group could file on a single Form 331 for a common response station hub, and a booster station which employs all channels in all groups? May we be permitted to save paper by filing one Form 331 per site to include all proposed applicants and all proposed facilities by all applicants at that site?

GEOGRAPHIC COORDINATES REFERENCE:

A reminder that all geographic coordinates must be referenced to the North American Datum 1983 (NAD83) reference, not the NAD27 reference which is used for current facilities at the FCC. (The FAA uses NAD83 for tower and structure locations) Heretofore the FCC has maintained use of the NAD27 reference. Most currently available USGS topographic maps were produced based on NAD27. Recent reprints include NAD83 corner tics. The salient question is: Must we convert every set of geographic coordinates for every existing or proposed facility to be studied from NAD27 to NAD83 prior to performance of the required interference analyses? Or, in the alternative, may we use NAD27 coordinates to conduct the required interference analyses to other facilities and then convert only the coordinates of the proposed station to NAD83 for filing?

INCUMBENT PROTECTED SERVICE AREAS DEFINED:

The instructions for Question 10 on FCC Form 331 address the "incumbent" MDS or commercial ITFS licenses regarding the coordinates of the fixed 35 mile circular protected service area. On September 15, 1995 the center coordinates became fixed at the then authorized or previously proposed coordinates. How does this affect the possible application of the "limited exception" definition of a protected service area? The partitioned service area is treated differently as to how interference is determined. It is, in most cases, imperative that we be allowed to invoke the "limited exception"definition of the "incumbent" station's protected service area, however, there appears to be no provision on the Form 331 to do so.

Additionally, the "limited exception" is described in Paragraphs 24 and 25 of the **Second Order on Reconsideration** (FCC 95-231) which was adopted on June 15, 1995 and released on June 21, 1995. This "limited exception" was adopted in conjunction with the expansion of the Protected Service Areas of MDS stations from the 710 square mile area within 15 mile radius circle to a 3848 square mile area within a 35 mile radius circle. The adoption of the "limited exception" to the definition of the PSA recognizes existing interference between incumbent co-channel stations which upon expansion of the PSAs does not disappear. The exception enables an incumbent who seeks to modify his facilities to exclude from the PSA of the other incumbent that area which already receives interference from the applicant's currently authorized facility.

The exception is again described in paragraphs 23 and 24 of the **DECLARATORY RULING AND ORDER** (FCC 96-304) which was adopted on July 9, 1996 and released on July 10, 1996. The exception is additionally defined as allowing the modification applicant to request a waiver of the protection criteria in Section 21.902, but only in the event that the two 35 mile radius PSAs overlap. (The stations are separated in distance by less than 70 miles.)

The exception is further addressed in paragraphs 69 - 72 of the **REPORT AND ORDER ON RECONSIDERATION** (FCC 99-178) which was adopted on July 13, 1999 and released on July 29, 1999. The conditions for use of the exception are extensively expanded, and include adjacent channel stations. "Thus, the limited exception ... is modified accordingly, to permit any MDS or ITFS station modification predicted to cause interference to any portion of the desired station's 35 mile psa, or to any of its receive sites that are registered previously, no matter when the modifying

station or the desired station was originally proposed, so long as such station modification is filed after the effective date of the expanded psa and adheres to the stricture that it would cause no new interference to the desired station." "We reiterate that the limited exception applies only to interference already existing between the modifying station and desired station *as to each other.*" Footnote 134 also states that "...this exception applies with respect to upstream transmissions, where all of the criteria from the exception, as clarified above, are met."

Application of the limited exception is essential, particularly in the most populous markets. However it is not at all clear how exactly to define the "existing interference area" using the exception. The exception definition is contained in paragraph 25 of the **Second Order on Reconsideration** (FCC 95-231) "... the area defined by the intersection of the predicted 45 dB desired to undesired signal ratio contour line associated with the modification applicant's previously authorized station and the 35 mile circle boundary of the desired station." Footnote 7 states: "A comparison will be made with the 45 dB desired-to-undesired signal ratio contour line associated with the applicant's station proposed in its modification application. Thus, we will compare the area in which interference is predicted pursuant to the previously authorized undesired station to the area in which interference is predicted pursuant to the undesired station's proposal in the modification application."

There is, however, no information describing an acceptable methodology to determine the "45 dB D/U signal ratio contour line". It is possible to predict the distance to signal contours using one of several methods. Predicting contour distances in the broadcast services for FM and television

stations is made relatively straightforward by use of FCC curves which are included in the Rules. Unfortunately these curves do not apply to the frequency range under consideration. Prediction models generally employed in the 2500-2690 MHz frequency range include Line-of-sight, Free-space, Free-space + RMD, etc. In making signal strength predictions, one of the important variables is the height of the receiving antenna. Signal strength predictions made for FM and television broadcast services are based on a receive antenna height of 30 feet (9.1 meters). Is it appropriate to assume such a receive antenna height in this context? If the limited exception is to be effectively employed to define existing interference it is important that an acceptable signal strength contour prediction method, which also sets forth all assumptions, be defined.

Additionally there is no mention of whether, since existing stations typically transmit analog television signals and many employ 10 kHz carrier offset, it might be permissible to define the existing interference area based on a 28 dB D/U signal contour ratio line. (Predicted interference from the modification application proposing digital transmission would, of necessity, be based on a 45 dB D/U signal ratio contour line) It is believed that using a 28 dB D/U signal contour ratio line in the cases where the existing stations employ 10 kHz offset will more accurately define the areas of existing interference, while not understating the interference-free service area of the desired incumbent station.

There is also no mention of whether it might be permissible in defining the exception interference area to apply the signal D/U discrimination available by using cross-polarization of transmitted signals. Although signal strength contours are predicted without consideration of

receiving antenna characteristics, it is believed that a more accurate definition of the existing interference-free service area of the desired incumbent station would be provided if the 20 dB cross-polarization discrimination afforded by the FCC reference antenna is applied.

In order to fully utilize the relief potentially afforded by the limited exception, clarification on at least these three points is absolutely vital.

INTERFERENCE ANALYSES REQUIREMENTS:

The Rules require applicants to perform certain analyses of the potential for causing harmful interference to authorized or previously proposed MDS and ITFS facilities and to serve these studies on affected licensees, conditional licensees and/or applicants together with a copy of this (331) application form and related exhibits. It is not clear what must be served and in what form. The Rules require the submission of information in the form of computer diskettes or CD-ROMs. Appendix D defines in minute detail exactly how to describe the proposed system on the digital media. It appears that the data to be included on the diskette or CD-ROM are descriptive of the proposed system, including the response station grid points. None of the information required to be supplied on the diskette or CD-ROM seems to be related to the performance and/or results of any interference analyses. Is it intended that the required descriptive material on the diskette or CD-ROM consist of the proposed system description? If so, the "incumbent" which receives the data will be required to conduct his own analysis of potential interference to himself which might be caused by the proposed two-way system.

If additional information is required to be provided to meet the interference analysis requirement, the Commission should state what that is, and in what form it should be provided. We request clarification of: a) what form should such analyses take? b) what information is to be included? c) in what format should the soon-to-be-defined required results be organized for delivery to the potentially affected incumbent? For example, may study or analysis results, of whatever they are ultimately determined to consist, be provided on electronic media, or must paper results and exhibits be provided.?

CONTENT OF FILING WITH FCC COPY CONTRACTOR:

It is important to determine what is to be provided, and in what format, to the copy contractor. The FCC apparently wants only the Form 331 and associated exhibits, while requiring, in addition to the Form 331 and exhibits, that either a diskette or a CD-ROM containing the information required in Appendix D be provided to the copy contractor. Is it permissible to provide only the complete system configuration and details to the copy contractor? The applications for a complete system might consist of at least several Forms 331. Each RSA and the associated hub site, along with any potential co-located booster station(s) could require the submission of up to several Forms and associated exhibits. The complete system could contain from six to more than 30 RSAs, booster and hub sites. Such proposed two-way system applications might contain as many and 60 to 75 Forms 331, depending on additional clarification. The required interference analyses from such proposed systems to incumbent stations would each be specific to each incumbent, and, depending

upon how many incumbent stations a system might potentially affect, these analyses could certainly become unwieldily. It would be senseless to shower an incumbent station with the results of interference analyses performed on other incumbents. It would be questionable at best to inundate the FCC copy contractor with results of interference analyses on all incumbents, especially if each incumbent has already been served with relevant study results. Why then would the copy contractor need to receive the results of incumbent interference analyses at all.

Clarification is necessary to determine whether the copy contractor is to be provided with all interference analyses results to all potentially affected incumbents, or sensibly not.

CERTIFICATE OF SERVICE

I, John Meehan, do hereby certify that on this 6th day of June, 2000, I caused true and correct copies of the foregoing Emergency Petition of ITFS 2020 to be served by hand, via third-party messenger, upon the parties on the attached service list.

John Meehan

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